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Cumulative Reflection

CprE 2024

Iowa State's Computer Engineering program has given me many skills and taught me many things about being a good engineer. Through the coursework required in this degree, I was exposed to not only Computer Engineering topics like digital circuit design and embedded systems, but also topics in Electrical Engineering and Computer Science to complement the core Computer Engineering courses. This allowed me to be a well-rounded computer engineer with the ability to connect software and hardware ideas together. Through my course work, I was also given the opportunity to build projects such as a robot vacuum, MIPS Processor, and many other small designs and tools.

In addition to my coursework, extra curriculars such as Formula SAE have given me the opportunity to apply the things that I learned in class as well as solve more problems. This experience allowed me to hone my skills and is the reason that I have been able to get some of my internships. I have learned just as much from my formula experience, if not even more than my coursework. It has allowed me to get comfortable with engineering systems and allowed me to find what I am passionate about. I have been able to grow as a person, find friends, and become a better engineer all in one place. I cannot emphasize enough how much of a difference Formula SAE has made to my college experience as well as my skills as an engineer.

In my coursework, projects, and job experiences one of the most important things that I have learned is that there is always more to learn. This is something that makes me excited to learn more. Iowa State has done a great job introducing topics and getting me started with advanced projects. Experiences like Formula SAE have allowed me to grow on my own, gain leadership, and improve my design skills. Throughout all of these, the common thing that I have learned is that you can always learn more about a topic and can always improve your designs.

There are a few classes that I think could be made significantly more beneficial for Computer Engineering students. I feel as though the curriculum is fairly Java heavy, which makes sense for Software Engineers and Computer Science students, but I wish the Computer Engineering degree path focused more on low level C and system design. I also think that classes such as CS 309 and CS 311 could be much more beneficial for Computer Engineering students if there were CprE specific versions offered. Both of the concepts covered in these courses are important in Computer Engineering but they are taught as

Computer Science classes which makes them more removed from the core Computer Engineering ideals.

This year I have also been participating in Senior Design. This has been yet another good experience that has allowed me to further dive into embedded systems and focus on what I am truly interested in. I have been able to interact with people in industry and work on more real-world projects that people will be able to use. It has allowed me to spend time learning more about things that I want to learn about and further my knowledge in the field of embedded systems.

Overall, I am happy with my education. It started off a bit rocky with covid, but I learned how to manage it and was able to find what I am passionate about and further my career goals.